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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/543,140

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EXAMINER

HEYI, HENOK G

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/543,140	Applicant(s) KINOSHITA ET AL.	
	Examiner HENOK G. HEYI	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odamura et al. US 2005/0233173 A1 (Odamura hereinafter) in view of Kikuchi et al. US 6,951,027 B2 (Kikuchi hereinafter).

Regarding claim 1, Odamura teaches an optical recording medium (a recording layer in which information can be optically recorded, para [0129]) comprising: a substrate (Substrate Film, para [0042]) including resin-impregnated paper in which a resin has been impregnated into paper or resin-coated paper in which the paper surface has been coated with a resin; and a recording layer provided on at least one side of the substrate (resin or emulsion impregnated paper, para [0071]). But Odamura fails to teach optical disk specifically. However, Kikuchi teaches an optical recording medium (an optical disc, Fig. 1) with a printed surface that could possibly be used in a card type of recording medium as well (see Fig. 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical recording card of Odamura (see para [0072]) to be an optical recording disk as taught by Kikuchi (col 4 lines 57-67). The modification would have been obvious because of the benefit of

optical discs over optical cards in storage capacity.

Regarding claim 2, Odamura teaches an optical recording medium according to claim 1, but is silent about the centerline average roughness Ra of at least one side of the substrate being $0.5\mu\text{m}$ or less, and the maximum roughness Rmax being $6.0\mu\text{m}$ or less. However, Kikuchi teaches an arithmetic mean relative roughness which is definitely below $6.0\mu\text{m}$ and preferably below $0.5\mu\text{m}$ as shown in Fig. 3.

Regarding claim 3, Odamura teaches an optical recording medium according to claim 1, further comprising: a printing layer provided on the side opposite from the side of the substrate provided with the recording layer (the intermediate transfer recording medium of the present invention, a rear layer, which has been known hitherto, may be formed on the back face of the substrate, para [0045]).

Regarding claim 4, Odamura teaches an optical disk according to claim 1, wherein the recording layer is provided on both sides of the substrate (other layers include an intermediate layer 6 which may constitute a part of the transferable portion, and a rear layer disposed on the surface of the substrate 2 opposite to the surface on which the transferable portion is present, para [0117]).

Regarding claim 5, Odamura teaches an optical disk according to any of claims 1 through 4, further comprising: a protective layer for protecting the recording layer (When the transferable portion is transferred onto the transfer-receiving material, the transferable portion functions as a protective layer, para [0136]).

Regarding claim 6, Odamura teaches an optical disk according to any of claims 1 through 4, wherein the recording layer has a recording layer base material that serves

as a support for the recording layer, and the recording layer base material includes a non-hydrophilic film (polyolefin, polyethylene, polypropylene and other non-hydrophilic materials are used, para [0059]).

Regarding claim 7, Odamura teaches an optical disk according to claim 5, wherein the recording layer has a recording layer base material that serves as a support for the recording layer and the recording layer base material includes a non-hydrophilic film (polyolefin, polyethylene, polypropylene and other non-hydrophilic materials are used, para [0059]).

Regarding claim 8, Odamura teaches an optical disk according to claim 3, wherein the printing layer has a printing base material that serves as a support for the printing layer and the printing base material includes a non-hydrophilic film (polyolefin, polyethylene, polypropylene and other non-hydrophilic materials are used, para [0059]).

Regarding claim 9, Odamura teaches an optical disk according to any of claims 1 through 4, further comprising: a release layer provided between the substrate and the recording layer (a receptor layer and a peelable layer which is interposed between the receptor layer and the substrate and which facilitates the release of the transferable portion from the substrate, para [0114]).

Regarding claim 10, Odamura teaches an optical disk according to claim 5, further comprising: a release layer provided between the substrate and the recording layer (a receptor layer and a peelable layer which is interposed between the receptor layer and the substrate and which facilitates the release of the transferable portion from the substrate, para [0114]).

Regarding claim 11, Odamura teaches an optical disk according to claim 3 or claim 8, further comprising: a release layer provided between the substrate and the printing layer (a receptor layer and a peelable layer which is interposed between the receptor layer and the substrate and which facilitates the release of the transferable portion from the substrate, para [0114]).

Regarding claim 12, Odamura teaches a manufacturing method of an optical disk, comprising the steps of: a recording layer sheet fabrication step in which a recording layer sheet is fabricated by forming tracks on a recording layer base material (a recording layer in which information can be optically recorded or read is formed beforehand, para [0129]); and a recording layer sheet lamination step in which a recording layer included the recording layer sheet is provided on a substrate (an intermediate transfer recording medium 1 is an example wherein a peelable layer 3 and a receptor layer 4 are successively laminated on a substrate, para [0035]) included resin-impregnated paper or resin-coated paper by laminating the recording layer sheet with resin-impregnated paper in which a resin is impregnated into paper or resin-coated paper in which the surface of the paper is coated with a resin (resin or emulsion impregnated paper, para [0071]).

Regarding claim 13, Odamura teaches a manufacturing method of an optical disk according to claim 12, further comprising the steps of: a printing sheet fabrication step in which a printing sheet is fabricated by carrying out printing on a printing base material (and a printed product obtained by forming an image on the receptor layer in the transferable portion by thermal transfer and then retransferring the formed image,

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together with the transferable portion, from the intermediate transfer recording medium to a transfer-receiving material, para [0002]); and a printing sheet lamination step in which a printing layer included of the printing sheet is provided on a substrate (thermal transfer recording has widely been used as a simple printing method. The thermal transfer recording is a method of laying a thermal transfer sheet wherein a colorant layer is disposed on one surface of a substrate film on a thermal transfer image-receiving sheet, para [0004]) included resin-impregnated paper or resin-coated paper by laminating the printing sheet with resin-impregnated paper in which a resin is impregnated into paper or resin-coated paper in which the surface of the paper is coated with a resin (resin or emulsion impregnated paper, para [0071]).

Regarding claim 14, Odamura teaches a manufacturing method of an optical disk according to claim 12, further comprising the steps of: a protective film lamination step in which a protective layer included a protective film is provided on the recording layer by laminating the protective film onto the recording layer (When the transferable portion is transferred onto the transfer-receiving material, the transferable portion functions as a protective layer, para [0136]).

Regarding claim 15, Odamura teaches a manufacturing method of an optical disk according to claim 13, further comprising the steps of: a protective film lamination step in which a protective layer included a protective film is provided on the recording layer by laminating the protective film onto the recording layer (When the transferable portion is transferred onto the transfer-receiving material, the transferable portion functions as a protective layer, para [0136]).

Regarding claim 16, Odamura teaches a manufacturing method of an optical disk according to any of claims 12 through 15, further comprising the steps of: a release layer formation step in which a release layer is formed on at least one side of the resin-impregnated paper or resin-coated paper in advance (a receptor layer and a peelable layer which is interposed between the receptor layer and the substrate and which facilitates the release of the transferable portion from the substrate, para [0114]).

Regarding claim 17, Odamura teaches a manufacturing method of an optical disk according to any of claims 12 through 15, wherein each sheet is produced in the form of a wound roll, and each sheet in the form of a wound roll is laminated (a commercially available laminator having a permanently-installed heat roll was used to transfer the transferable portion 5 wherein the above-mentioned images were formed onto a transfer-receiving material, para [0158]).

Regarding claim 18, Odamura teaches a manufacturing method of an optical disk according to claim 13, wherein the printing sheet fabrication step has a step in which mutually different variable information imparted to each optical disk produced is printed on the printing base material (a printed product obtained by forming an image on the receptor layer in the transferable portion by thermal transfer and then retransferring the formed image, together with the transferable portion, from the intermediate transfer recording medium to a transfer-receiving material, para [0002]).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK G. HEYI whose telephone number is (571)270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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